

## **10 Reasons to Vaccinate Babies Before They are Age 2**

Immunization prevents the following 10 serious infections that can cause disease, disability, and death. Historically these diseases used to strike thousands of children each year. Today there are relatively few cases, but each year outbreaks still occur. Except where noted, these diseases spread when viruses or bacteria pass from an infected person to the nose or throat of others. (Double-click on each photo to enlarge.)

1. **Polio.** (Poliomyelitis) Polio is a disease caused by a virus. It enters a child's (or adult's) body through the mouth. It causes *paralysis* and it can kill people who get it, usually by paralyzing the muscles that help them breathe.



- child has a severely deformed leg because of polio
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2. **Measles.** Measles virus causes rash, cough, runny nose, eye irritation, and fever. It can lead to ear infection, pneumonia, seizures (jerking and staring), brain damage, and death.



- measles rash covering child's arms and stomach
- approximately day 4 of the rash
- eventually rash will cover whole body

3. **Diphtheria.** Diphtheria is spread by a bacterium that causes a thick covering in the back of the throat. It can lead to breathing problems, paralysis, heart failure, and even death.



- child has "bullneck diphtheria"
- neck very swollen

**4. Mumps.** Mumps virus causes fever, headache, and swollen glands. It can lead to deafness, meningitis (infection of the brain and spinal cord covering), painful swelling of the testicles or ovaries, and, rarely, death.



- child very swollen under the jaw and in the cheeks due to mumps

**5. Pertussis (whooping cough).** Pertussis can be a very serious disease, especially for infants. From 1997-2000, one out of every five children with pertussis was hospitalized, including more than half (63%) of all infants under six months. There were also 62 deaths during this period and most (90%) of the deaths were in infants. Pertussis causes coughing spells so bad that it is hard for infants to eat, drink, or breathe. These spells can last for weeks. It can lead to pneumonia, seizures (jerking and staring spells), brain damage, and death.

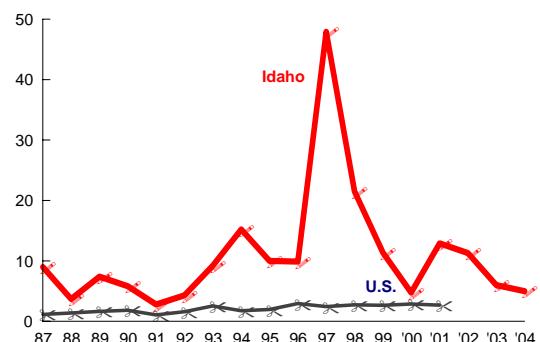
Pertussis immunity starts to wane once an individual reaches adolescence. To help prevent infant and childhood pertussis cases it is recommended to receive a pertussis booster between the **ages of 11 and 18 years of age.**

**6. Rubella (German measles).** Rubella is usually a mild disease in children; children first break out in a rash, which starts on the face and progresses down the body. Vaccinating infants has the benefit of protecting them from a mild case of rubella. It also provides lifelong immunity which is particularly important for pregnant women. Rubella infection in the first trimester of pregnancy can lead to fetal death, premature delivery, and a number of serious birth defects.

In October of 2004 data supported that rubella had been eliminated from the United States.

## Pertussis

Rate of disease per 100,000: Idaho and U.S.-- 1987 - 200



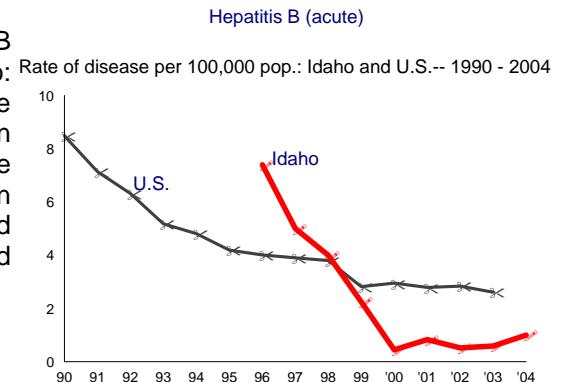
- serious disease that can strike both adults and children
- spreads through coughing, sneezing, or just talking to an infected person

**7. Hib Meningitis.** *Haemophilus influenzae* type b (Clinical Manifestations: 50% Meningitis, 17% Epiglottitis, 15% Pneumonia, Osteomyelitis, Arthritis, Cellulitis, Bacteremia) Hib is a bacterial disease. It is spread through the air by coughing, sneezing, or even breathing. Sometimes the bacteria spread into the lungs or bloodstream. This is called invasive Hib disease.



- child has swollen face due to Hib infection
- tissue under the skin covering the jaw and cheek is infected
- infection spreading into her face
- she is probably very sick

**8. Hepatitis B.** Hepatitis B is a serious disease. The hepatitis B virus (HBV) can cause short-term (acute) illness that leads to: loss of appetite, diarrhea and vomiting, tiredness, jaundice (yellow skin or eyes), pain in muscles, joints, and stomach. It can also cause long-term (chronic) illness that leads to: liver damage (cirrhosis), liver cancer, and death. In the United States, an estimated 3,000–4,000 persons die each year of HBV-related cirrhosis, and another 1,000-1,500 die each year of HBV-related liver cancer.



**9. Varicella (chickenpox).** Varicella is a common childhood disease. It is usually mild, but it can be serious, especially in young infants and adults. It causes a rash, itching, fever, and tiredness. It can lead to severe skin infection, scars, pneumonia, brain damage, or death. About 12,000 people are hospitalized for chickenpox each year in the United States. About 100 people die each year in the United States as a result of chickenpox.



- boy has chickenpox rash
- some of the sores are red spots and some are blisters
- the red spots will become blisters and new red spots will form

10. **Tetanus (lockjaw).** Tetanus is caused by a toxin (poison) produced by bacteria that enters the body through a cut or wound. Tetanus causes painful tightening of the muscles, usually all over the body. It can lead to “locking” of the jaw, and serious muscle convulsions that can break the spine or long bones. Tetanus leads to death in about 1 out of 10 cases.

